

# Water in Agriculture



**WORLD BANK GROUP**  
Water



**GWSP**  
GLOBAL WATER  
SECURITY & SANITATION  
PARTNERSHIP

## TOWARDS RESILIENT AGRICULTURE



Water in agriculture is central to feeding the planet, providing livelihoods, and building resilience to climate shocks and extremes. Yet sustainable achievement of these objectives is threatened by growing demand for food and fiber, unsustainable resource use, and ever increasing climate volatility and change.

Our objective is to support a more water-resilient food system, in line with local and global dietary needs, that boosts livelihoods, respects the environment, and promotes resilience to climate shocks.



We work to strengthen our global and local understanding of the role of water in our food systems for evidence-based decision making, to improve water productivity in rainfed and irrigated agriculture by addressing economic and absolute water scarcity in agriculture, to improve service delivery and innovation for higher performance and accountability, and focus on building resilience and mitigate climate impacts.



### TO SUPPORT THE COVID-19 RESPONSE AND RECOVERY, WE WORK TO:

- Ensure continuity of irrigation services that sustain critical agricultural production and enable employment in light of short-term fiscal stresses and operational constraints on irrigated agriculture.
- Provide cash injections to rural communities, create job opportunities for the vulnerable, and improve the productivity of agro-environmental assets (such as irrigation channels and drainage systems) to build long-term resilience to shocks.

Over the next **30 years**,  
the world's population is expected to reach  
**10 billion people.**

To feed the world and support a wide range of other social needs, agriculture must become more productive, resource efficient, and environmentally sustainable.

About **3.2 billion people**

live in agricultural areas experiencing high levels of water stress or high drought frequency.



An estimated **78%** of the world's poor



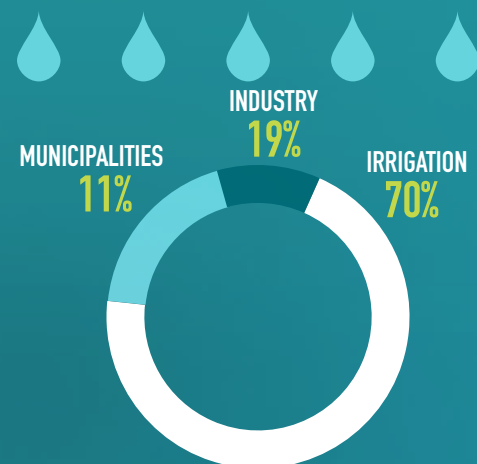
live in rural areas and depend primarily on agriculture for basic income – most of them on smallholder family farms.

## The Water We Eat:

irrigation covers only  
**20%**  
of the total land used for agriculture,

but supports  
**40%**  
of global food and fodder output,

and  
**55%**  
of output value.



Global abstraction of water  
Irrigation is responsible for using  
**70%**

of global freshwater abstracted from rivers, lakes, and aquifers. Irrigation pumping uses **6%** of global electricity and irrigated rice alone is responsible for **11%** of human methane emissions.

Sustainable agriculture is needed to increase food production, support profitable farms that create jobs, and bolster resilience. This requires **improvements in water service provision and soil water management.**



Smarter water is introducing water management in underserved areas without access to irrigation to improve resilience to weather shocks. It is also improving agricultural output and reducing real water loss in irrigated areas in water-stressed areas. **Hybrid and tailored solutions are needed to improve water productivity globally.**



Water-resilient food systems require shifts in what is produced where, better accounting of the sector's water-related footprints and social values, and a valuation of the role the sector (can) play in **achieving basin water security.**